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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,681	09/15/2000	Raanan Ben-Zur	21391-705	1912

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EXAMINER

DINH, KHANH Q

ART UNIT

PAPER NUMBER

2151

DATE MAILED: 03/26/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/662,681

Applicant(s)

BEN-ZUR ET AL.

Examiner

Khanh Dinh

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-12 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 5-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al., US pat. No.6,105,079 in view of Dittmar, US pat. No.6,674,751.

As to claim 1, Kuo discloses an interface transmitter (using MMU 52 fig.2 to control the reading and writing data frames) coupled among a plurality of network elements (16, 18b and 20 fig.2) of at least one network, wherein a plurality of data frames of a first type are received from at least one processor (Bus Interface Unit 16 fig.2) and stored in at least one random access memory (RAM) (SRAM 18 fig.2), wherein data is read from the at least one RAM to at least one data serializer in response to a plurality of signals received from the at least one

processor (BUI 16 fig.2) and over at least one network(transferring data frames from PCI bus, see col.3 lines 5-28 and col.5 line 36 to col.6 line 50), wherein a plurality of data frames of a second type (F2 type frame of fig.5) corresponding to the plurality of data frames of a first type (F1 type of data frame of fig.5) are generated and serially transferred among the plurality of network elements using the at least one network (see abstract, figs.2, 5A, 5B, col.7 lines 8-51 and col.9 lines 12-51).

Kuo does not specifically disclose using a backplane network. However, Dittmar discloses processing data elements using a backplane network (see fig.1, col.3 line 56 to col.4 line 41). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to implement a Dittmar's backplane network into the computer system of Kuo to connect network devices because it would have supported other circuit boards, devices and the interconnections among network devices and provided power/data signals to supported devices.

As to claim 2, Kuo discloses at least one data frame of a second type comprises switching event information of the plurality of network elements (tracking the location of stored data, see col.7 lines 8-51 col.9 lines 12-51).

As to claim 4, Kuo discloses generating at least one unit interrupt signal (see col.3 lines 5-28) in response to the data changes, generating at least one memory map in response to the at least one unit interrupt signal (updating the frames track in response to a change of a single bit) and generating at least one massive interrupt signal in response to the at least one unit interrupt signal (see fig.4 and col.7 line 60 to col.8 line 57 and col.9 lines 12-51).

As to claim 5, Kuo discloses protection switching (52 fig.2) is controlled in the plurality of network elements by the at least one processor (16 fig.1) in response to the switching event information, wherein the at least one

processor navigates among a plurality of memory locations using a plurality of memory maps in response to at least one interrupt signal, reads data from the plurality of memory locations relating to the switching event information and evaluates the switching event information (controlling the reading and writing of data frames, see fig.2, col.5 line 36 to col.6 line 51).

As to claims 6 and 10, Dittmar further discloses using a 16-channel bus network and a data frame of one field-programmable gate array (FPGA) (see col.5 line 11 to col.6 line 54). It would have been obvious to one of the ordinary skill in the art at the time the invention was made to implement Dittmar's teachings into the computer system of Kuo to connect network devices and circuit boards because it would have reduced data overheads and increased data transmission across a serial link.

As to claims 7 and 8, Kuo discloses the plurality of data frames of a first format correspond to a plurality of input channels among the plurality of network elements and a plurality of memory areas (F1, F2, F3 fig.5A) distributed among the plurality of network elements (see figs.1, 5, col.4 lines 12-63 and col.5 line 36 to col.6 line 36).

As to claims 9, Kuo discloses at least one dual port RAM (SRAM 18 fig.2) (see col.5 line 36 to col.6 line 36).

As to claim 12, Kuo discloses a plurality of processors (16, 20 fig.2) distributed among the plurality of network elements (see figs.1, 2, col.4 lines 11-63 and col.5 line 36 to col.6 line 36).

Allowable Subject Matter

4. Claims 3, 4 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Bellenger et al, US pat. No.6,263,016
 - b. Provencher et al, US pat. No.6,639,910.
 - c. Hendel et al, US pat. No.5,602,995.
 - d. Ben-Zur et al., US pat. No.6,633,573.

Conclusion

6. Claims 1, 2, 5-10 and 12 are rejected.
7. Claims 3, 4 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (703) 308-8528. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess, can be reached on (703) 305-4792. The fax phone number for this group is (703) 872-9306.

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A shortened statutory period for reply is set to expire THREE months from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned (35 U. S. C . Sect. 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(A).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305 -9600.


FRANTZ B. JEAN
PRIMARY EXAMINER

Khanh Dinh
Patent Examiner
Art Unit 2151
3/21/2004